

Instructional strategies and instructional design models are terms commonly used interchangeably with a very unclear distinction. Both can be used as general terms to describe the way in which teachers attempt to achieve instructional goals and improve student learning. Instructional design models provide an overall structure for planning instruction, while instructional strategies are the modes of instruction used by teachers within the overarching design framework.


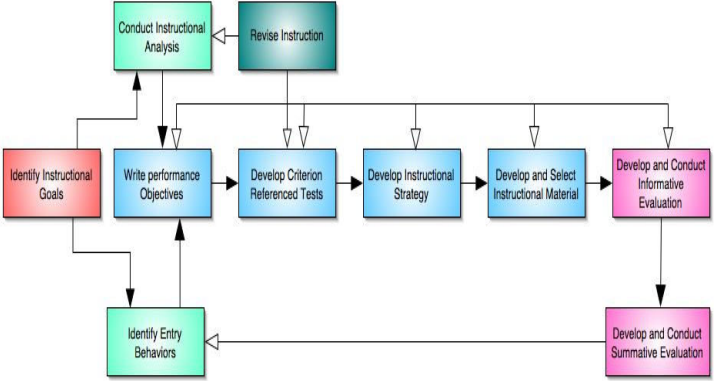
Instructional design models offer a bird's eye view of an instructional plan. The ADDIE model (analysis, design, development, implementation, and evaluation) is the generic or simple base for many design models. During the analysis stage, the overall learning situation is taken into consideration to determine learning problems and goals. The design phase focuses on the development of specific learning objectives. Those objectives actually come to life during the development phase when materials are created. After the plan is implemented in a real setting, it is evaluated for effectiveness. The two instructional design models below are compared using ADDIE as a guide. The Understanding By Design (UbD) and Dick and Carey models follow the ADDIE format, but lend themselves better to particular types of learning.

Understanding By Design is guided by the three stages of backward design: identify desired results, determine acceptable evidence, and plan learning experiences and instruction. An explicit "big idea" or important idea must be specified to lead instruction and learning (Wiggins & McTighe, 2005). The main focus is to promote deeper understanding for learners through a logical and goal-oriented system. UbD is probably most useful for designing units of study or "curricular units" rather than individual lessons or larger programs. (Wiggins & McTighe,

2005). Designers use a template for planning desired results, assessment evidence, and a learning plan. UbD is also structured to meet the needs of K-12 teachers most effectively or appropriately.

UbD is a more specific design model than the Dick and Carey model.

The Dick and Carey model approaches instructional design with a system of interconnected parts. Constant evaluation and revision takes place in order to improve best support learning outcomes. There are ten components that work in a cycle of planning, developing, implementing, and continuous revision (Dick & Carey, 2009). The model is a better fit for big programs at any level rather than curricular units at the K-12 level. The following is a comparison of the Dick and Carey model and the UbD model based on the ADDIE model of instructional design.

	Understanding By Design (UbD)	Dick & Carey
	<p>Technology in the MYP</p> <p>The design cycle</p> 	 <p>Dick and Carey Instructional Design Model</p>
A	Stage 1: What are the desired results, goals, understandings, questions? What will the students know and be able to do? Identify big understanding and misunderstandings.	Identify instructional goals, instructional analysis, and analyze learners and contexts.
D	Stage 2: Assessment Evidence-performance tasks and other evidence.	Write performance objectives, develop criterion referenced tests (assessment instruments).
D	Stage 3: Learning Plan-what will the learning activities/experiences be? How will the design achieve desired results?	Develop instructional strategy, develop and select instructional materials.

I	Implementation of planned instructional experiences.	Implementation of design and development components.
E	Use summative assessment and design criteria to determine if the evidence shows that the desired learning outcomes were met.	Design and conduct formative evaluation of instruction, revise instruction accordingly.

Instructional strategies are used in the implementation stages of instructional design.

Teachers decide the best method to convey information to students in order to reach the desired learning targets. The following table shows my comparison of inquiry teaching and problem-based learning. Inquiry teaching provides a gradual evolving role for both the students and the teacher. As the student progresses closer to inquiry, the instruction moves specific and direct to more general and open. I chose inquiry teaching as an instructional model because it employs other instructional models within. It's a sort of continuum of instructional strategies within an instructional strategy. Problem-based learning is a more focused and specific instructional strategy that provides a planned problem for students to solve in a systematic way. The problem pushes learning forward and in the process skills are developed. Students often work in pairs or teams to collaboratively solve the problem. Critical thinking skills and other 21st century skills are promoted in problem-based learning.

	Inquiry Teaching	Problem-based Learning
	<p>The Path Towards Student Inquiry</p>	
Comparison Criteria	Model 1	Model 2
Relative “student-centeredness”	Moves from less student-centered to fully student-centered, teacher moves from tutor to model.	Fully student-centered, teacher acts as guide or facilitator.
Assessment	Changes as the learning strategies and teacher/student roles change.	Authentic, performance based.
21st Century Skills	As students move toward inquiry the development of 21 st century skills increases	Higher-order thinking, creativity, technology use, etc.
Ease of Use	Requires a strong understanding of multiple learning strategies.	Strong planning by teacher, front-loaded to allow for multiple solutions and avoid a problem that is too difficult.

Instructional design models and instructional strategies are extremely important in planning a successful learning system. Design models require in depth thought at each stage in planning for optimal learning. If something doesn’t work, then revisions are made. Instructional strategies are used within an instructional design model and are chosen to best fit the learning outcomes. Implementing instructional design models and instructional strategies helps teachers go beyond theoretical implications and use practical application to find what works.

Resources

Dick, W., Carey L., & Carey, J.O. (2009). *The systematic design of instruction* (7th ed.). Boston: Pearson.

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

<http://carbon.ucdenver.edu/~mryder/itc/idmodels.html>

<http://www.learning-theories.com/>